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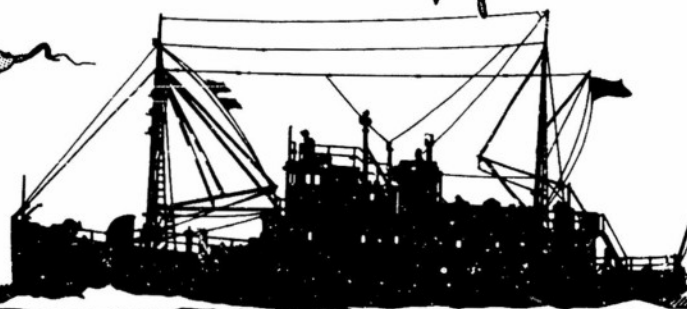
# DEPARTMENT OF OCEANOGRAPHY UNIVERSITY OF WASHINGTON

Technical Report No. 22

EASTERN NORTH PACIFIC  
OFFSHORE PHYSICAL AND CHEMICAL DATA  
OBSERVED DURING 1952

Office of Naval Research  
Contract N8onr-520/ill  
Project NR 083 012  
Contract Nonr-477(01)  
Project NR 083 072

Reference 54-6  
February 1954



SEATTLE 5, WASHINGTON

UNIVERSITY OF WASHINGTON DEPARTMENT OF OCEANOGRAPHY  
(Formerly Oceanographic Laboratories)  
Seattle, Washington

EASTERN NORTH PACIFIC  
OFFSHORE PHYSICAL AND CHEMICAL DATA  
OBSERVED DURING 1952

by

Robert G. Paquette, Eugene E. Collias,  
and Cuthbert M. Love

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February 1954

  
Richard H. Fleming  
Executive Officer

## INTRODUCTION

This report contains all of the offshore data collected during 1952 by University of Washington personnel aboard the Department of Oceanography research vessel BROWN BEAR. Station location charts are presented before the data for each cruise (see pages 1, 3, 7, and 15). BROWN BEAR Cruise No. 1 was primarily carried out inside the Strait of Juan de Fuca and Puget Sound, and thus had only the three offshore stations shown on the chart on page 1. Data for stations inside the Strait and for Puget Sound taken during 1952 will be presented in separate reports.

### Station Numbering System

All stations occupied by the BROWN BEAR are numbered consecutively, independent of their location.

### Sampling Bottles

Water samples were taken with Nansen bottles, enlarged modified  $2\frac{1}{2}$ -liter Knudsen bottles, and Fjarlie bottles (1).

### Determination of Properties

Deep-sea reversing thermometers were used to determine temperature. Copenhagen standard sea water was used exclusively as the standard in the determination of salinity of the sea water. Dissolved oxygen was determined by the modified Winkler method described by

Thompson and Robinson (2). Phosphates which were observed only on Cruise 7 are presented in the Appendix (pages 25-26). These were determined by the method described by Thompson and Robinson (3), except that the color intensity was measured by an electric eye photometer (4) instead of using Nessler tubes. The depths reported for sub-surfaces observations were calculated from measured wire angle, from unprotected reversing thermometer readings, and from curves of wire length minus thermometric depth versus wire length, the L-Z curve method described by LaFond (5).

#### Data

The time at which the messenger was dropped on the first cast is listed for the +8 time zone. Positions are given to the nearest minute. Depth in fathoms was obtained with the aid of a Navy NMC echo sounder. Weather is reported in the Navy bathythermograph weather code given in H. O. Publication No. 606-C, except in cases where the only weather phenomenon reported is the state of the sky. For the state of the sky the following symbols were used: b., clear sky; b.c., blue sky with detached clouds; c., sky mainly cloudy; and o., sky overcast. Wind velocity is reported in knots. Air temperature is reported in degrees Fahrenheit. In the cases where both dry and wet bulb temperatures were observed, the dry bulb reading is listed first, followed by a virgule (/) and then the wet bulb reading.

All data are actual observed values. The maximum depth of sampling was 2000 meters wherever the depth of the water permitted. An unusual amount of pre-tripping of sampling bottles occurred during

the first several cruises. This resulted in some loss of data with gaps in the normal depth sequence. All clearly questionable data have been excluded.

The presentation of these data in this form does not constitute publication. Subsequent, more rigorous analyses of these data may disclose errors which are not apparent at this time.

#### REFERENCES

- (1) Fjarlie, R. L. I.  
1953. A Seawater Sampling Bottle. Jour. Mar. Res., 12(1):21-30.
- (2) Thompson, T. G. and R. J. Robinson  
1939. Notes on the Determination of Dissolved Oxygen in Sea Water. Jour. Mar. Res., 2(1):1-8.
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1948. The Determination of Phosphates in Sea Water. Jour. Mar. Res., 7(1):33-41.
- (4) Ford, William L.  
1950. Seagoing Photoelectric Colorimeter. Anal. Chem., 22:1431-1435.
- (5) LaFond, E. C.  
1951. Processing Oceanographic Data. U. S. Navy H. O. Publication No. 614, Washington, D. C.

## PERSONNEL

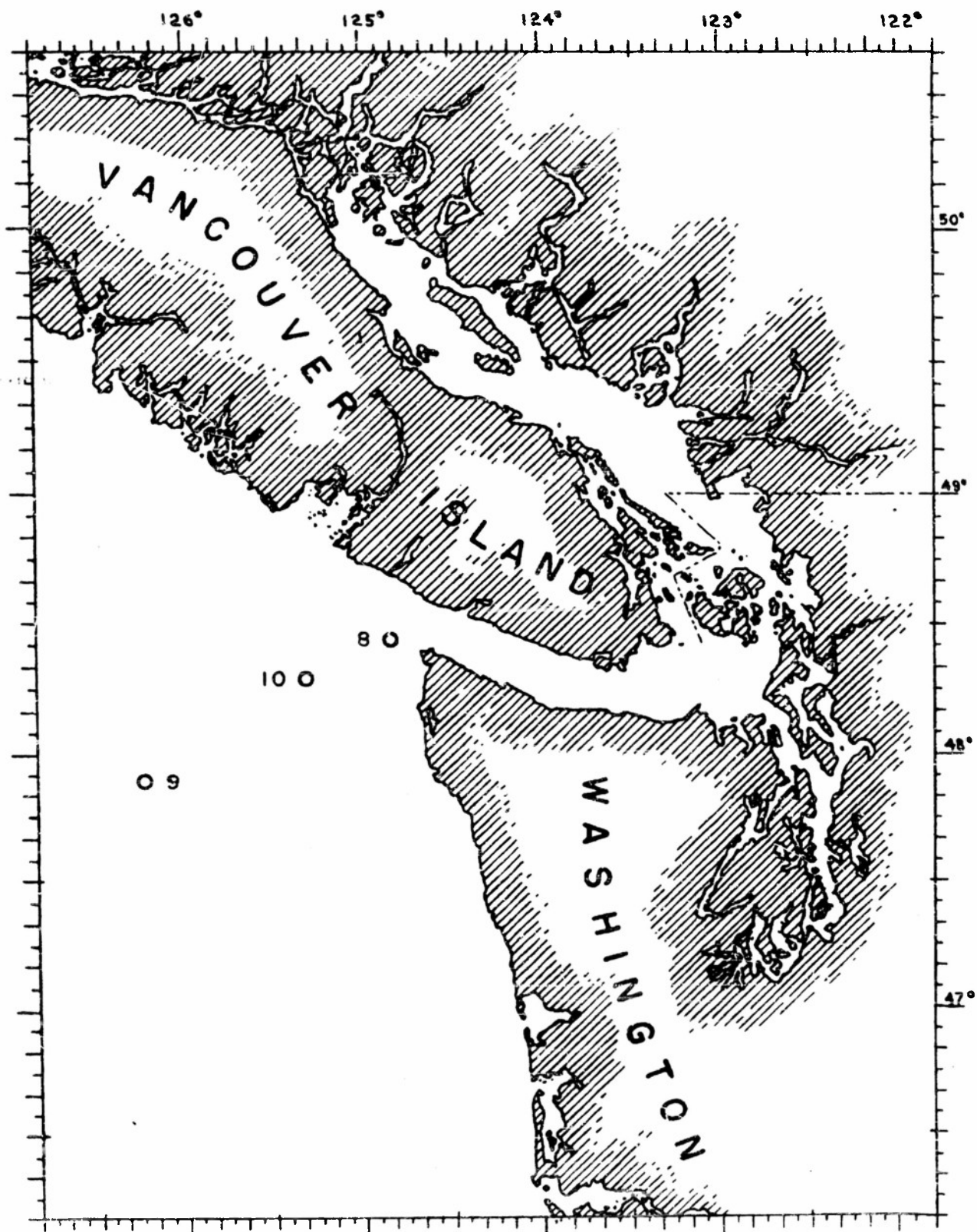
### AT SEA

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Barnes, Dr. Clifford A.	Associate Professor of Oceanography
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Mackay, Bruce S.	Assistant Oceanographer *
McLean, Max C.	Laboratory Assistant
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Russell, Lowell D.	Laboratory Helper
Seiner, Bob	Machinist
Vail, William R.	Second Officer
Wennekens, M. Pat	Research Assistant

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Duxbury, Alyn C.	Laboratory Helper
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Fenton, Betty	Secretary
Griffin, Beverly M.	Student Assistant
Hanson, Donald S.	Laboratory Assistant
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Reynolds, Jack F.	Computer
Toner, Roberta J.	Clerk

\* Pacific Oceanographic Group, Nanaimo, B. C.



Oceanographic Station Locations  
Brown Bear Cruise No. 1  
11 - 15 March 1956

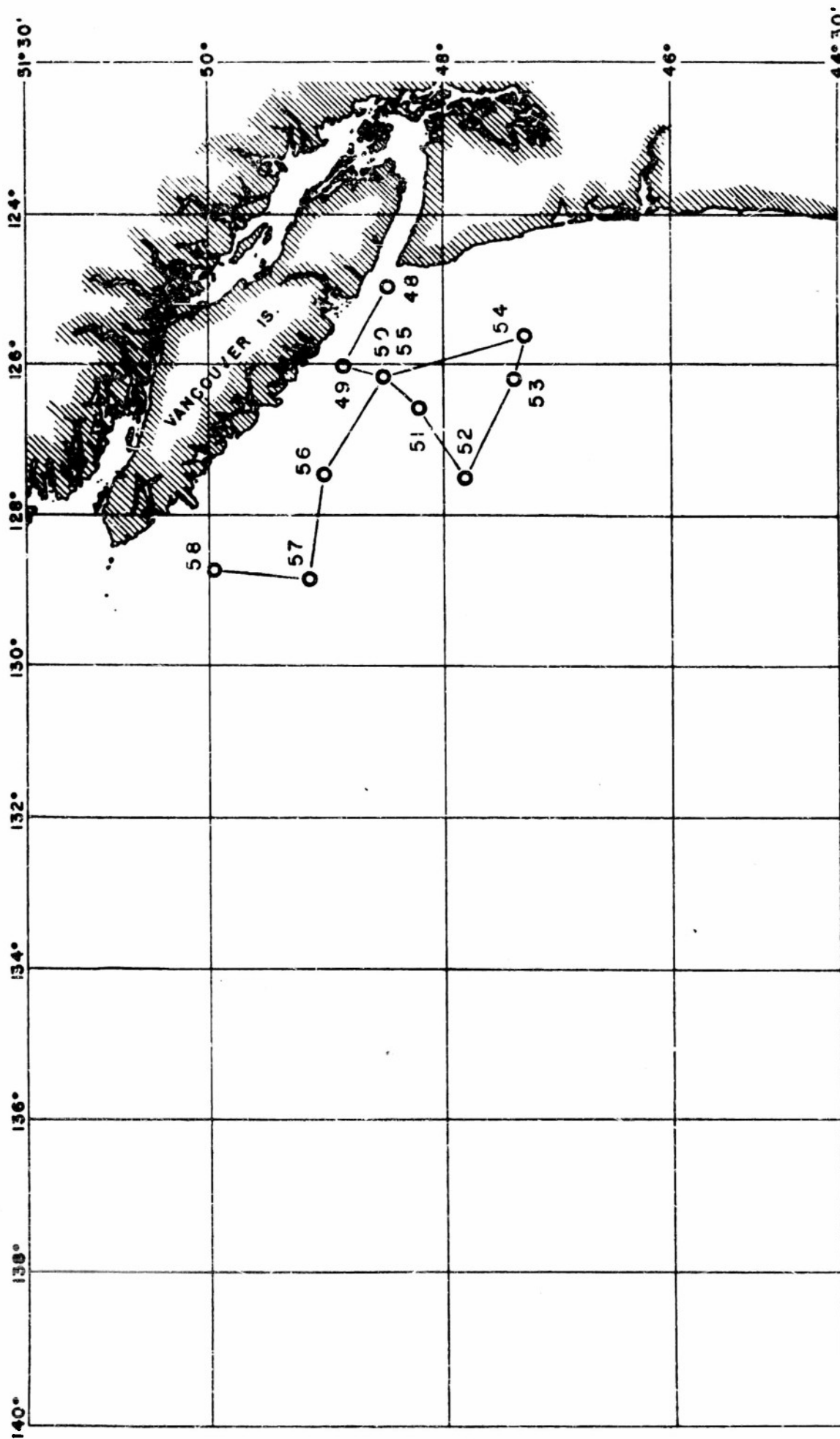


STA 8      48° 26' N      WEATHER --- 14 Mar 52    124° 52' W      WIND SE 16 1130 (+8)    DEPTH 155 fm      ----			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	7.93	31.33	0.579
4	7.93	31.35	0.463
8	7.82	31.39	0.512
16	7.58	31.45	0.474
25	7.62	31.54	0.466
41	7.83	31.82	0.520
63	7.97	32.11	0.410
82	7.92	32.56	0.349
111	7.84	32.73	0.377
148	7.81	33.31	0.312
159	7.70	33.53	0.255

STA 10      48° 17' N      WEATHER -- 15 Mar 52    125° 20' W      WIND NE 15 0438 (+8)    DEPTH 78 fm      ----			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	7.99	32.52	0.551
10	7.98	32.53	0.424
20	7.98	32.54	0.439
30	8.07	32.54	0.537
50	7.95	32.54	0.491
75	7.94	32.59	0.426
100	----	33.14	0.279
125	7.76	33.47	0.279

STA 9      47° 53' N      WEATHER -- 14 Mar 52    126° 17' W      WIND NE 18 2045 (+8)    DEPTH 1000 fm      ----			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	7.43	32.52	0.561
10	7.46	32.52	0.581
20	7.44	32.53	0.572
30	7.44	32.52	0.567
50	7.39	32.53	0.580
75	7.40	32.54	0.575
100	7.47	33.23	0.383
150	7.13	33.73	0.303
197	6.64	33.86	0.286
296	5.69	33.89	0.193
394	5.30	34.03	0.096
591	4.62	34.21	0.068
791	4.13	34.21	0.025
985	3.47	34.38	0.026
1372	2.77	34.47	0.052
1777	2.15	34.53	0.086





Oceanographic Station Locations  
Brown Bear Cruise No. 4  
29 April - 5 May 1952

STA 48      48° 27' N      WEATHER b. 29 Apr 52    124° 50' W    WIND SE 10 0050 (+8)    DEPTH 157 fm    43° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	8.19	32.00	0.401
5	8.20	32.01	0.558
10	8.11	32.13	0.505
19	8.04	32.20	0.491
28	8.03	32.23	0.462
47	7.57	32.81	0.371
71	7.66	33.12	0.390
96	7.24	33.50	0.297
140	6.88	-----	-----
143	6.69	33.76	0.225
183	6.64	33.82	0.201
209	6.55	-----	0.190

STA 50      48° 32' N      WEATHER 81 1 May 52    126° 08' W    WIND SW 3 2358 (+8)    DEPTH 105 fm    45° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	8.06	32.38	0.615
5	8.08	32.41	0.610
10	8.06	32.41	0.610
20	7.90	32.43	0.602
30	7.88	32.44	0.602
50	7.92	32.42	0.602
75	7.91	32.42	0.595
100	7.67	32.45	0.584
140	7.41	32.62	0.327
180	6.83	33.47	0.268

STA 49      48° 52' N      WEATHER b. 29 Apr 52    126° 00' W    WIND E 21 0827 (+8)    DEPTH ---      45° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	8.56	31.97	0.653
5	8.55	31.97	0.581
10	8.53	31.97	0.578
20	8.46	31.97	0.644
30	7.85	32.26	0.607
40	7.60	32.37	0.603
60	7.67	32.64	0.482

STA 51      48° 17' N      WEATHER bc 2 May 52    126° 34' W    WIND SW 6 0435 (+8)    DEPTH 1175 fm    45° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	8.12	32.53	0.577
5	8.11	32.55	0.581
10	8.08	32.55	0.586
20	7.97	32.61	0.581
30	7.94	32.54	0.582
50	7.96	32.57	0.532
595	4.50	34.05	0.102
1705	2.30	34.56	0.081

STA 52      47° 50' N      WEATHER o. 2 May 52      127° 29' W      WIND NE 5 1158 (+8)      DEPTH 1449 fm      50° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	8.79	-----	0.581
5	8.35	-----	0.513
10	8.36	-----	0.574
20	8.24	-----	0.524
30	8.21	-----	0.574
50	8.24	-----	0.582
100	7.18	-----	0.407
200	6.36	-----	0.264
300	5.46	33.94	0.167
400	5.32	-----	0.072
600	4.31	34.18	0.041
799	3.59	34.43	0.022
998	3.25	34.36	0.020
1496	2.54	-----	-----
1993	1.94	34.58	0.120

STA 54      47° 17' N      WEATHER c. 3 May 52      125° 34' W      WIND W 20 0329 (+8)      DEPTH 800 fm      43° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	8.50	32.26	0.605
5	8.56	32.27	0.593
10	8.50	32.25	0.582
20	8.47	32.27	0.612
30	8.42	32.28	0.596
49	8.50	32.29	0.602
98	7.85	33.28	0.363
197	6.93	33.94	0.219
330	6.04	34.02	0.162
495	5.16	34.11	0.067
826	4.55	34.34	0.020

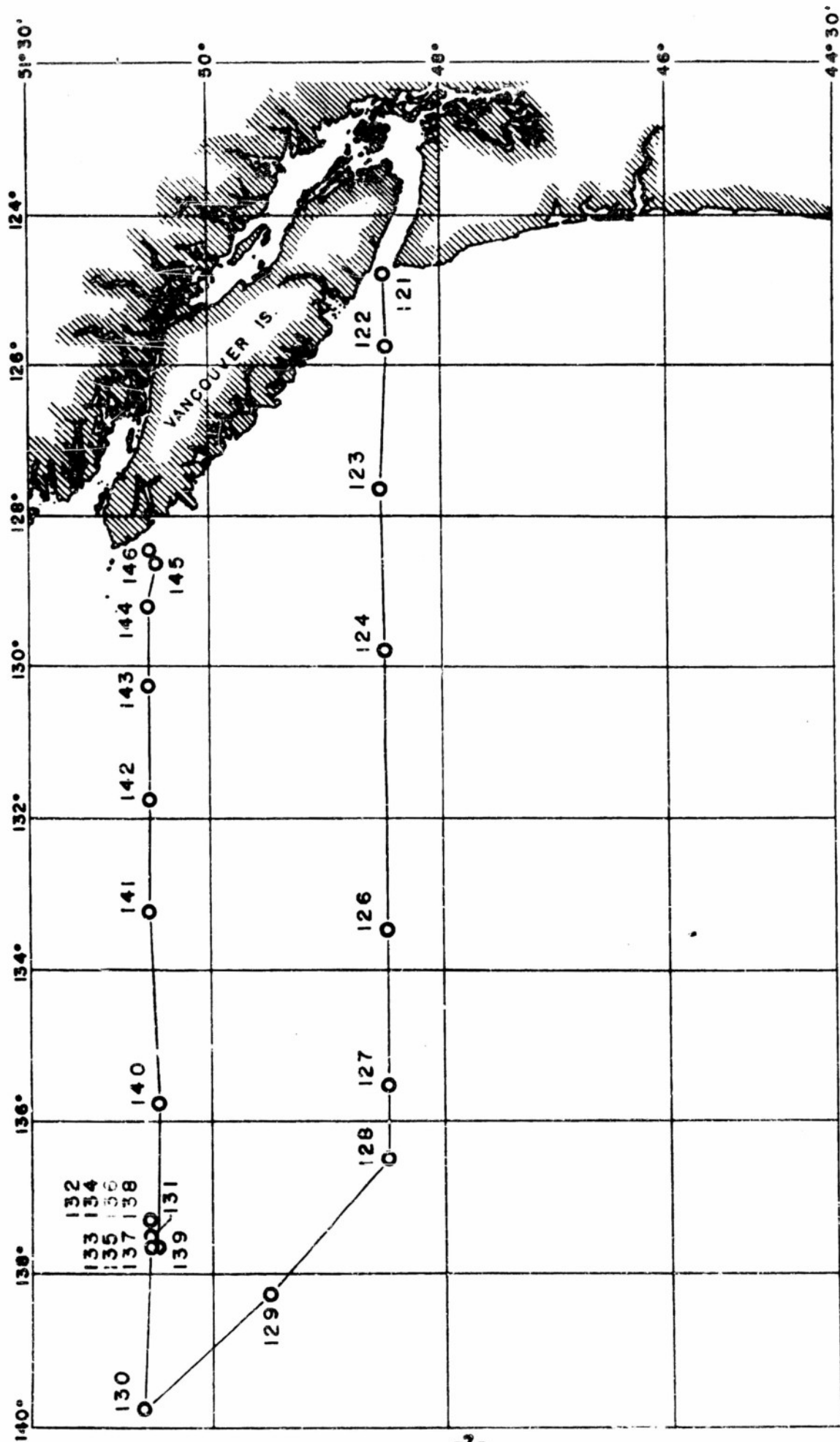
STA 53      47° 23' N      WEATHER c. 2 May 52      126° 10' W      WIND W 10 2236 (+8)      DEPTH 1000 fm      44° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	8.26	32.54	0.586
5	8.22	32.56	0.601
10	8.21	32.56	0.595
20	8.20	32.57	0.605
30	8.23	32.57	0.616
50	8.24	32.55	0.591
100	7.13	32.87	0.528
200	6.60	33.84	0.296
300	5.85	33.95	0.165
400	5.30	34.05	0.088
600	4.55	34.17	0.037
800	3.90	34.29	0.027
1000	3.51	34.39	0.030
1500	2.54	34.52	0.081

STA 55      48° 32' N      WEATHER b. 4 May 52      126° 08' W      WIND NW 14 2154 (+8)      DEPTH 177 fm      45° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	-----	32.47	0.602
5	8.25	32.56	0.607
10	8.22	32.43	0.608
19	8.04	32.47	0.605
29	7.94	32.45	0.627
48	7.92	32.46	0.584
97	7.13	33.23	0.405
193	6.77	34.04	0.236
290	6.13	34.00	0.182

STA 56      49° 02' N      WEATHER b. 5 May 52      127° 25' W      WIND NNW 14 0839 (+8)      DEPTH 1100 fm      50° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	8.18	32.52	0.565
5	8.17	32.55	0.596
10	8.16	32.55	0.596
20	8.05	32.54	0.595
30	7.78	32.57	0.595
49	7.76	32.56	0.595
98	6.74	33.15	0.465
197	6.06	33.86	-----
292	5.35	33.90	0.211
390	4.77	33.97	0.141
585	4.54	34.16	0.042
779	4.02	34.31	0.053
974	3.55	34.39	0.033
1162	2.52	34.52	0.067
1948	1.95	34.59	0.128

STA 58      49° 58' N      WEATHER b. 6 May 52      128° 41' W      WIND NW 23 1212 (+8)      DEPTH 1060 fm      48° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	7.75	32.58	0.595
5	7.69	32.59	0.612
10	7.70	32.59	0.602
19	7.66	32.58	0.602
29	7.63	32.58	0.595
48	7.36	32.58	0.592
97	6.67	32.89	0.518
193	6.37	33.91	0.227
273	5.99	33.95	0.183
366	5.43	33.99	0.148
554	4.76	34.14	0.037
742	4.01	34.26	-----
935	3.46	34.35	0.028
1213	2.83	34.44	0.049
1590	2.22	34.55	0.026

STA 57      49° 10' N      WEATHER b.c. 5 May 52      128° 48' W      WIND NW 20 1845 (+8)      DEPTH 1350 fm      46° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	8.33	32.68	0.595
5	8.32	32.68	0.598
10	8.29	32.67	0.636
20	8.18	32.68	0.636
30	7.90	32.69	0.571
49	7.83	33.43	0.556



Oceanographic Station Locations  
Brown Bear Cruise No. 7  
2 - 16 July 1952

FORM UW-OL-03-1

STA 121 48° 30' N WEATHER 52  
3 July 52 124° 43' W WIND WNW 8  
0037 (+8) DEPTH 130 fm 54° F

Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	10.95	31.34	0.507
5	9.57	31.56	0.473
10	8.83	32.13	0.389
20	8.85	32.36	0.390
30	8.50	32.52	0.385
50	7.30	32.77	0.399
75	6.82	33.46	0.201
100	6.39	33.74	0.168
150	6.23	33.86	0.154
200	6.04	33.91	0.165

STA 123 48° 32' N WEATHER b.c.  
4 July 52 127° 37' W WIND WNW 8  
1832 (+8) DEPTH 1395 fm 56° F

Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	13.34	32.53	0.540
5	13.36	32.51	0.535
10	13.31	32.52	0.528
20	12.81	32.53	0.543
30	10.77	32.56	0.590
50	8.38	32.52	0.571
100	7.02	33.14	0.422
196	6.29	33.88	0.245
292	5.54	34.12	0.158
485	4.70	34.12	0.055
727	3.98	34.32	0.030
972	3.35	34.38	0.025
1450	2.54	34.48	0.053
1923	1.95	34.59	0.113

STA 122 48° 29' N WEATHER c.  
4 July 52 125° 42' W WIND WNW 16  
0635 (+8) DEPTH 52 fm 54° F

Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	10.74	31.36	0.656
5	11.59	31.38	0.656
10	9.50	31.78	0.467
20	8.48	32.09	0.330
30	8.27	32.21	0.312
50	7.99	32.40	0.292
75	7.52	32.95	0.231
90	7.34	33.08	0.219

STA 124 48° 30' N WEATHER b.c.  
5 July 52 129° 45' W WIND W 1  
0641 (+8) DEPTH 1300 fm 55° F

Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	12.60	32.52	0.544
5	12.62	32.52	0.542
10	12.58	32.52	0.540
20	12.07	32.51	0.550
30	10.40	32.52	0.577
49	8.39	32.59	0.547
98	8.18	33.41	0.393
197	7.53	33.78	0.217
295	6.74	33.94	0.175
490	5.35	34.05	0.084
728	4.22	34.20	0.033
982	3.48	34.33	0.018
1479	2.49	34.52	0.053
1977	2.00	34.60	0.118

STA 126      48° 30' N      WEATHER 10 6 July 52    133° 21' W      WIND SxZ 10 0656 (+8)    DEPTH 1700 fm    55° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	11.57	32.63	0.550
5	11.55	32.65	0.552
10	11.53	32.66	0.543
20	11.51	32.66	0.515
30	11.50	32.65	0.543
50	8.91	32.67	0.592
100	6.53	32.67	0.569
200	6.40	33.86	0.350
300	5.22	33.86	0.269
500	4.15	34.00	0.105

STA 128      48° 30' N      WEATHER 10 7 July 52    136° 30' W      WIND NE 12 0232 (+8)    DEPTH 2173 fm    54° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	10.74	32.58	0.563
5	10.70	32.59	0.577
10	10.71	32.58	0.518
20	10.43	32.59	0.579
30	10.34	32.59	0.500
50	6.91	32.66	0.438
99	5.73	32.69	0.431
197	5.32	33.81	0.320
296	4.51	33.89	0.195
492	3.87	34.07	0.077
739	3.45	34.25	0.043
985	2.99	34.46	0.029
1476	2.38	34.38	0.040
1970	1.95	34.58	0.101

STA 127      48° 30' N      WEATHER b. 6 July 52    135° 30' W      WIND SSW 12 1907 (+8)    DEPTH 2100 fm    57° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	11.31	32.58	-----
5	11.24	32.59	0.523
10	11.00	32.60	0.560
19	10.83	32.57	0.555
28	10.02	32.60	0.566
47	7.21	32.64	0.549
94	6.05	32.67	0.575
187	5.36	33.81	0.344
268	4.79	33.85	0.227
413	4.27	33.97	0.127
588	3.90	34.16	0.054
766	3.39	34.27	0.037
1157	2.68	34.42	0.035
1570	2.25	34.50	0.067

STA 129      49° 30' N      WEATHER 10 7 July 52    138° 14' W      WIND SSW 15 1848 (+8)    DEPTH -----    57° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	10.14	32.57	0.586
5	10.12	32.58	0.595
10	10.10	32.58	0.610
19	9.87	32.58	0.613
28	9.70	32.57	0.591
47	6.44	32.63	0.616
94	5.73	32.65	0.603
188	5.41	33.84	0.290
282	4.33	33.84	0.209
456	4.32	34.10	0.052
684	3.77	34.27	0.038
918	3.09	34.35	0.038
1410	2.45	34.48	0.047
1880	2.03	34.59	0.104



STA 130      50° 34' N      WEATHER 10 8 July 52    139° 46' W      WIND SE 4 0930 (+8)    DEPTH 2100 fm    52° F			
Depth (m)	Temp (°C)	Sal (‰)	O <sub>2</sub> (mg-at/L)
0	9.41	32.60	0.580
5	9.35	32.59	0.587
10	9.32	32.57	0.584
20	9.27	32.57	0.585
30	9.25	32.57	0.577
50	7.23	32.66	0.597
100	5.06	32.73	0.600
200	4.61	33.81	0.263
300	4.19	33.90	0.127
500	3.84	34.11	0.059
750	3.43	34.28	0.036
1000	3.01	34.33	0.033
1500	2.37	34.51	0.060
2000	1.95	34.51	0.095

STA 132      50° 30' N      WEATHER 45 9 July 52    137° 18' W      WIND S 1 0233 (+8)    DEPTH 2080 fm    52° F			
Depth (m)	Temp (°C)	Sal (‰)	O <sub>2</sub> (mg-at/L)
0	11.07	32.56	0.555
5	10.36	32.56	0.557
10	10.26	32.56	0.560
20	9.95	32.56	0.565
30	8.44	32.59	0.588
50	5.92	32.66	0.585
100	5.20	32.90	0.513
200	5.26	33.85	0.219
300	5.15	33.97	0.120
500	4.31	34.13	0.052
750	3.67	34.26	0.034
1000	3.18	34.41	0.026

STA 131      50° 30' N      WEATHER 45 8 July 52    137° 30' W      WIND W 3.5 2257 (+8)    DEPTH 2050 fm    52° F			
Depth (m)	Temp (°C)	Sal (‰)	O <sub>2</sub> (mg-at/L)
0	11.21	32.53	0.562
5	10.30	32.55	0.574
10	10.20	32.55	0.571
20	10.00	32.55	0.570
30	9.19	32.57	-----
50	5.95	32.64	0.578
100	5.31	32.92	0.504
200	5.33	33.83	0.246
300	5.15	33.95	0.132
500	4.31	34.09	0.054
750	3.63	34.25	0.034
1000	3.07	34.36	0.031
1500	2.36	34.51	0.035
2000	1.95	34.57	0.113

STA 133      50° 30' N      WEATHER 10 9 July 52    137° 38' W      WIND E 3 0528 (+8)    DEPTH 2000 fm    53° F			
Depth (m)	Temp (°C)	Sal (‰)	O <sub>2</sub> (mg-at/L)
0	11.05	32.54	0.573
5	10.27	32.54	0.580
10	10.18	32.54	0.587
20	10.07	32.54	0.577
30	8.64	32.56	0.575
50	5.81	32.60	0.597
100	5.21	-----	0.602
200	5.79	-----	0.547
300	4.89	-----	0.213
500	4.22	-----	0.166
750	3.64	34.25	0.035
1000	3.10	34.37	0.030

STA 134      50° 30' N      WEATHER o. 9 July 52    137° 18' W      WIND EXN 5 0839 (+8)    DEPTH 2100 fm    53° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	10.58	32.55	0.583
5	10.30	32.56	0.585
10	10.22	32.57	0.580
20	10.05	32.56	0.575
30	9.70	32.5	0.587
50	6.66	32.6	0.605
100	5.01	32.92	0.537
200	5.54	33.86	0.237
300	4.92	33.95	0.143
500	4.36	34.14	0.052
750	3.56	34.32	0.033
1000	3.14	34.43	0.029

STA 136      50° 30' N      WEATHER c. 9 July 52    137° 18' W      WIND ENE 3 1448 (+8)    DEPTH 2100 fm    62° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	11.54	32.52	0.557
5	10.94	32.55	0.575
10	10.33	32.56	0.567
20	10.16	32.56	0.572
30	9.66	32.56	0.582
50	6.86	32.62	0.598
99	4.77	32.84	0.568
197	5.55	33.86	0.216
293	4.95	33.93	0.087
493	4.34	34.12	0.045
740	3.57	34.23	0.035
985	3.19	34.38	0.029

STA 135      50° 30' N      WEATHER o. 9 July 52    137° 38' W      WIND ENE 6 1136 (+8)    DEPTH 2050 fm    54° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	----	32.56	0.583
5	----	32.56	0.585
10	----	32.56	0.570
20	----	32.56	0.572
30	----	32.60	0.592
50	----	32.66	0.606
100	----	33.07	0.476
200	----	33.90	0.209
300	----	33.88	0.178
500	----	34.08	0.073
750	----	34.26	0.031
1000	----	34.36	0.029

STA 137      50° 30' N      WEATHER b.c 9 July 52    137° 38' W      WIND NxE 8 1721 (+8)    DEPTH 2050 fm    55° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	12.00	32.55	0.573
5	10.67	32.55	0.582
10	10.28	32.55	0.577
20	10.08	32.55	0.575
30	9.90	32.56	0.575
50	6.77	32.62	0.595
100	5.18	32.77	0.560
200	5.46	33.86	0.247
300	4.94	33.95	0.136
500	4.09	34.07	0.076
750	3.59	34.26	0.029
1000	3.15	34.37	0.028

STA 138      50° 30' N      WEATHER b. 9 July 52    137° 18' W      WIND NNE 8 2024 (+8)    DEPTH 2100 fm    55° F			
Depth (m)	Temp (°C)	Sal (‰)	O <sub>2</sub> (mg-at/L)
0	11.69	32.56	0.564
5	10.51	32.56	0.572
10	10.30	32.56	0.575
20	10.05	32.56	0.571
30	8.74	32.58	0.608
50	6.78	32.65	0.612
99	4.72	32.87	0.564
199	5.05	33.77	0.266
297	4.57	33.90	0.149
493	4.15	34.15	0.052
739	3.63	34.29	0.030
986	3.07	34.40	0.031

STA 140      50° 27' N      WEATHER c. 10 July 52    135° 46' W      WIND N 20 1030 (+8)    DEPTH 1950 fm    54° F			
Depth (m)	Temp (°C)	Sal (‰)	O <sub>2</sub> (mg-at/L)
0	11.42	32.38	-----
5	11.50	32.41	0.562
10	11.46	32.42	0.570
20	11.19	32.42	0.558
30	8.51	32.61	0.614
50	7.18	32.64	0.597
90	5.76	32.95	0.488
181	5.42	33.83	0.318
272	4.76	33.89	0.184
453	4.25	34.09	0.062
647	3.74	34.31	0.028
850	3.45	34.34	0.026
1348	2.44	34.47	0.052
1841	2.02	34.58	0.105

STA 139      50° 28' N      WEATHER c. 9 July 52    137° 38' W      WIND NW 12 2342 (+8)    DEPTH 2050 fm    52° F			
Depth (m)	Temp (°C)	Sal (‰)	O <sub>2</sub> (mg-at/L)
0	11.62	32.53	0.565
5	11.63	32.56	0.567
10	10.39	32.55	0.574
20	10.21	32.54	0.567
30	9.45	32.56	0.579
49	6.69	32.63	0.585
97	5.14	32.83	0.530
195	5.65	33.87	0.209
293	5.22	33.95	0.136
487	4.09	34.06	0.080
731	3.67	34.27	0.032
975	3.10	34.37	0.030
1459	2.40	34.51	0.033
1950	1.98	34.60	0.105

STA 141      50° 30' N      WEATHER b. 11 July 52    133° 15' W      WIND NW 19 1726 (+8)    DEPTH 1720 fm    57° F			
Depth (m)	Temp (°C)	Sal (‰)	O <sub>2</sub> (mg-at/L)
0	12.13	32.37	0.545
5	12.11	32.36	0.552
10	12.12	32.34	0.553
20	12.11	32.35	0.548
30	9.48	32.57	0.596
49	7.21	32.65	0.567
98	6.29	33.03	0.360
197	5.44	33.86	0.251
282	5.03	33.98	0.139
470	4.50	34.14	0.052
437	4.48	34.11	0.065
617	3.82	34.27	0.034
1771	2.08	-----	-----

STA 142      50° 30' N      WEATHER b. 12 July 52   131° 45' W      WIND NW 8 0624 (+8)   DEPTH 1600 fm      ----			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	13.07	32.04	0.531
5	13.03	32.04	0.533
10	13.38	32.06	0.529
20	12.50	32.53	0.595
30	8.76	32.55	0.597
50	7.19	32.60	0.592
100	6.32	32.87	0.508
200	5.55	33.81	0.369
295	4.85	33.95	0.131
492	4.35	34.11	0.060
739	3.83	34.31	0.030
986	3.25	34.41	0.026
1478	2.38	34.52	0.081
1975	1.95	34.59	0.117

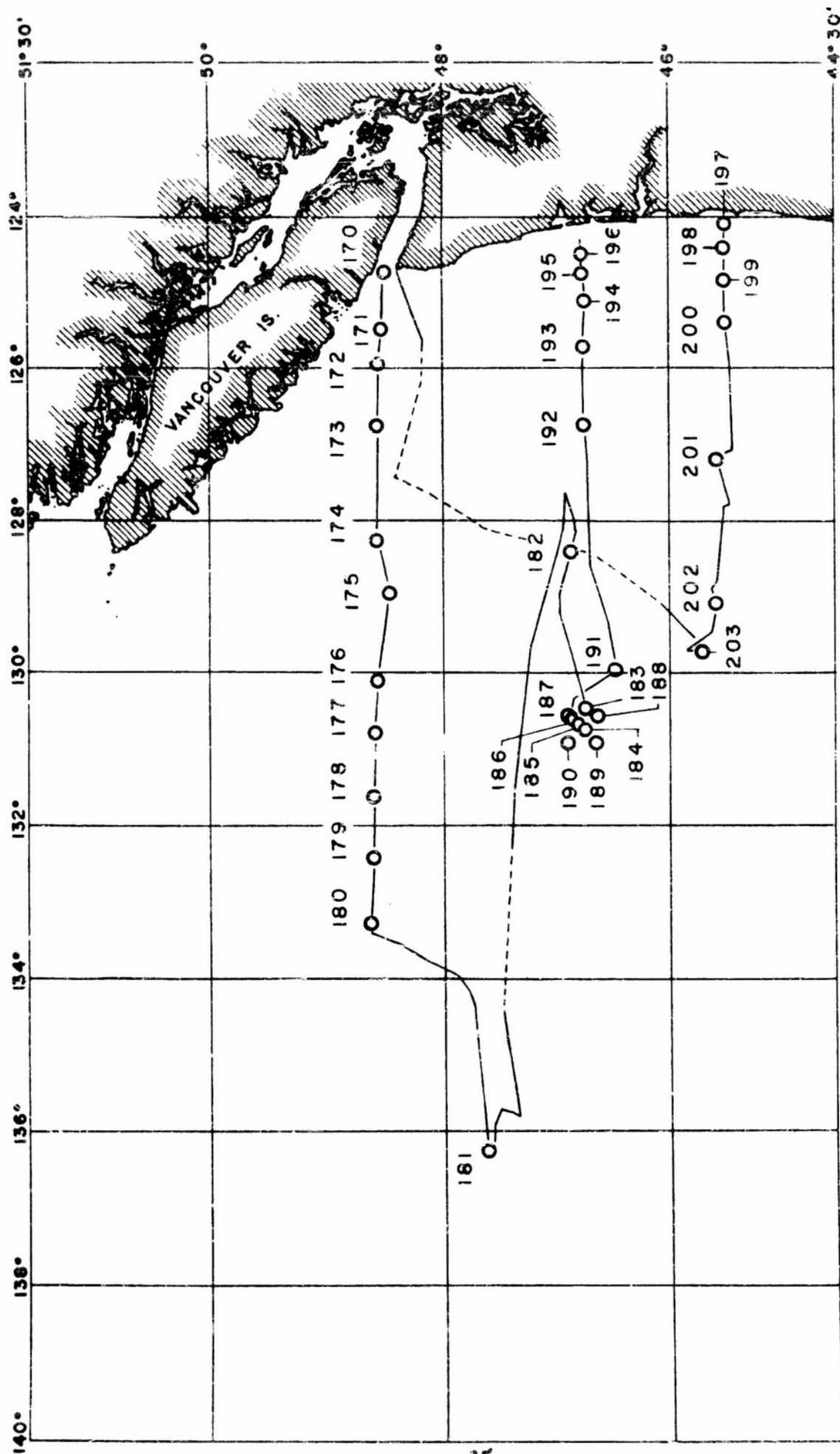
STA 144      50° 30' N      WEATHER 45 12 July 52   129° 11' W      WIND SSW 3 2231 (+8)   DEPTH 1050 fm      53° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	10.86	31.69	0.615
5	10.71	31.74	0.622
10	10.58	31.87	0.664
20	9.20	32.15	0.522
30	8.92	32.23	0.474
50	7.94	32.47	0.438
99	6.36	33.54	0.347
198	6.01	33.94	0.200
282	5.52	33.97	0.145
472	4.71	34.13	0.052
705	4.16	34.26	0.052

STA 143      50° 30' N      WEATHER b. 12 July 52   130° 15' W      WIND NW 4 1446 (+8)   DEPTH 1050 fm      62° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	13.87	31.87	0.528
5	13.68	31.87	0.533
10	13.35	31.89	0.542
20	11.38	32.48	0.567
30	9.87	32.56	0.569
50	7.75	32.64	0.600
99	6.52	32.90	-----
198	5.64	33.83	0.302
291	4.86	33.92	0.175
490	4.06	34.09	0.069
738	3.65	34.29	0.026
995	3.24	34.40	0.024
1389	2.50	34.49	0.056
1788	2.09	34.60	0.105

STA 145      50° 28' N      WEATHER 45 13 July 52   128° 39' W      WIND NW 1 0522 (+8)   DEPTH 860 fm      54° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	12.70	31.88	0.572
5	12.67	31.87	0.577
10	12.71	31.92	0.571
20	11.87	32.37	0.564
30	8.92	32.58	0.585
50	7.21	32.65	0.586
100	6.71	33.22	0.420
200	6.47	33.91	0.190
300	5.67	33.97	0.162
500	4.81	34.14	0.058
750	4.10	34.32	0.020
1000	3.64	34.39	0.021
1200	3.13	34.47	0.032
1400	2.90	34.51	0.041

STA 146      50° 29' N      WEATHER 45  
 13 July 52   128° 28' W      WIND NW 1  
 0731 (+8)   DEPTH 113 fm      54° F

Depth (m)	Temp (°C)	Sal (‰)	O <sub>2</sub> (mg-at/L)
0	12.86	32.02	0.566
5	12.84	32.04	0.565
10	12.92	32.13	0.573
20	11.56	32.47	0.585
30	-----	32.63	0.585
50	7.67	32.62	0.570
75	6.68	32.71	0.415
100	6.68	33.23	0.330
140	6.50	33.68	0.220
180	6.03	33.91	0.559



Oceanographic Station Locations  
Brown Bear Cruise No. 9  
15 August - 5 September 1952

STA 170      48° 30' N      WEATHER b. 19 Aug 52    124° 44' W      WIND W 6 0050 (+8)    DEPTH 152 fm    54°/53° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	10.86	31.39	0.435
5	10.80	31.41	0.464
10	10.68	31.53	0.465
20	9.72	31.94	0.410
30	8.78	32.42	0.323
50	7.52	33.24	0.320
98	7.21	33.60	0.226
157	6.62	33.83	0.193
247	6.40	33.94	0.174

STA 172      48° 32' N      WEATHER b. 19 Aug 52    125° 58' W      WIND SW 4 0912 (+8)    DEPTH 72 fm      62°/60° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	15.40	32.16	0.635
5	12.84	32.40	0.682
10	12.28	32.44	0.685
20	8.99	32.59	0.525
30	8.18	32.64	0.520
50	7.75	32.88	0.383
75	7.28	33.29	0.362
100	7.10	33.66	0.275
120	6.83	33.82	0.242

STA 171      48° 31' N      WEATHER b. 19 Aug 52    125° 23' W      WIND W 4 0457 (+8)    DEPTH 75 fm      56°/55° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	13.79	32.39	0.686
5	13.72	32.37	0.683
10	10.69	32.56	0.576
20	8.68	32.96	0.323
30	7.62	33.24	0.235
50	6.78	33.64	0.209
75	6.52	33.73	0.186
100	6.36	33.87	0.193
130	6.33	33.87	0.173

STA 173      48° 33' N      WEATHER b. 19 Aug 52    126° 47' W      WIND SW 8 1428 (+8)    DEPTH 1120 fm    64°/62° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	16.00	32.47	0.545
5	15.41	32.47	0.542
10	14.45	32.46	0.559
20	13.42	32.47	0.575
30	12.49	32.52	0.625
50	8.07	32.61	0.598
100	7.32	32.91	0.510
199	6.66	33.92	0.253
496	4.88	34.13	0.059
745	4.14	34.30	0.031
994	3.56	34.39	0.027
1492	2.52	34.53	0.064
1992	1.92	34.62	0.138



STA 174      48° 33' N      WEATHER c. 19-20 Aug 52 128° 14' W      WIND W 6 0005 (+8)      DEPTH 1290 fm      60°/59° F			
Depth (m)	Temp (°C)	Sal (‰)	O <sub>2</sub> (mg-at/L)
0	15.39	32.48	-----
5	14.59	32.54	-----
10	14.43	32.54	-----
20	14.07	32.55	-----
30	-----	32.55	-----
50	-----	32.53	-----
100	7.26	32.84	-----
199	6.34	33.87	-----
298	5.58	33.97	-----
495	4.56	34.09	-----
748	-----	34.29	-----
998	3.31	34.42	-----
1498	2.46	34.52	-----
1998	1.92	34.60	-----

STA 176      48° 33' N      WEATHER c. 20 Aug 52      130° 04' W      WIND SW 6 1228 (+8)      DEPTH 1520 fm      66°/64° F			
Depth (m)	Temp (°C)	Sal (‰)	O <sub>2</sub> (mg-at/L)
0	15.69	32.50	-----
5	-----	32.50	-----
10	15.40	32.49	-----
20	14.78	32.51	-----
30	14.68	32.49	-----
50	9.80	32.59	-----
100	7.11	32.68	-----
200	6.63	33.82	-----
300	5.38	33.89	-----
500	4.47	34.09	-----
682	3.89	34.21	-----
1194	2.98	34.45	-----
1518	2.42	34.50	-----

STA 175      48° 27' N      WEATHER b. 20 Aug 52      128° 58' W      WIND SW 8 0611 (+8)      DEPTH 1350 fm      60°/59° F			
Depth (m)	Temp (°C)	Sal (‰)	O <sub>2</sub> (mg-at/L)
0	15.32	32.47	0.546
5	-----	32.43	0.549
10	14.16	32.41	0.552
20	13.62	32.40	0.552
30	10.78	32.51	0.571
50	7.75	32.63	0.595
99	6.95	32.98	0.481
199	6.22	33.90	0.259
298	5.59	33.96	0.166
500	4.70	34.12	0.064
750	4.01	34.27	0.036
1000	3.32	34.41	0.029
1500	2.40	34.55	0.070
2000	1.93	34.60	0.130

STA 177      48° 34' N      WEATHER c. 20 Aug 52      130° 48' W      WIND NW 2 1834 (+8)      DEPTH 1500 fm      61°/59° F			
Depth (m)	Temp (°C)	Sal (‰)	O <sub>2</sub> (mg-at/L)
0	15.68	32.44	0.535
5	15.41	32.45	0.538
10	15.13	32.44	0.541
20	14.72	32.46	0.542
30	14.54	32.44	0.552
50	8.85	32.69	0.556
98	7.03	32.76	0.556
200	6.19	33.84	0.365
300	5.27	33.90	0.236
486	4.43	34.05	0.087
734	3.91	34.25	0.033
983	3.38	34.36	0.027
1483	2.42	34.50	0.059
1971	1.95	34.59	0.128

STA 178      48° 35' N      WEATHER c. 21 Aug 52    131° 34' W      WIND SW 9 0049 (+8)    DEPTH 1680 fm    61°/59° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	15.58	32.59	0.529
5	15.58	32.59	0.541
10	15.56	32.59	0.540
19	14.98	32.65	0.535
28	14.65	32.66	0.529
48	8.74	32.66	0.614
98	6.53	32.69	0.588
196	5.92	33.80	0.430
295	5.09	33.88	0.217
473	4.28	34.05	0.095
711	-----	34.22	0.031
950	3.28	-----	0.026
1438	2.46	34.51	0.054
1932	1.99	34.59	0.109

STA 180      48° 37' N      WEATHER c. 21 Aug 52    133° 15' W      WIND S 26 1304 (+8)    DEPTH 900 fm    61°/59° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	15.28	32.61	0.531
5	15.26	32.65	0.535
9	15.31	32.64	0.541
18	15.22	32.64	0.538
28	14.98	32.62	-----
46	-----	32.64	0.635
94	6.50	32.65	0.621
192	5.12	-----	-----
288	5.13	33.82	0.276
322	4.92	34.05	0.254
552	4.32	34.27	0.059
1008	3.19	34.43	0.026
1480	2.37	34.48	0.064

STA 179      48° 35' N      WEATHER c. 21 Aug 52    132° 24' W      WIND SW 10 0651 (+8)    DEPTH 1700 fm    60°/58° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	15.28	32.55	0.505
5	15.22	32.55	0.502
10	15.26	32.56	0.519
20	14.92	32.52	0.502
30	14.24	32.54	0.510
49	7.80	32.67	0.595
98	6.36	32.77	0.365
196	5.82	33.87	0.306
295	4.90	33.89	0.216
493	4.14	34.09	0.087
740	-----	34.25	0.039
988	3.15	34.36	0.031
1486	2.44	34.50	0.050
1985	1.99	34.60	0.043

STA 181      47° 37' N      WEATHER 60 23 Aug 52    136° 15' W      WIND SW 22 0644 (+8)    DEPTH 2180 fm    59°/58° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	14.93	32.61	0.540
5	13.84	32.62	0.536
10	14.90	32.62	0.537
19	14.83	32.61	0.551
28	14.78	32.62	0.550
734	3.53	34.27	0.050
982	3.02	34.38	0.036
1488	2.36	34.50	0.054
1988	-----	34.60	0.118

STA 182      46° 52' N      WEATHER c. 25 Aug 52    128° 27' W      WIND WNW 16 1511 (+8)    DEPTH 1460 fm    64°/60° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	-----	32.52	0.525
5	15.43	32.51	0.530
10	15.44	32.50	0.531
20	15.38	32.50	0.529
30	13.41	32.57	0.630
49	8.69	32.61	0.583
100	-----	33.03	0.455
200	6.56	33.85	0.281
299	5.88	33.98	0.193
494	-----	34.07	0.093
742	4.12	34.29	0.035
990	3.56	34.40	0.027
1487	2.48	34.53	0.076
1985	1.95	34.57	0.134

STA 184      46° 46' N      WEATHER c. 27 Aug 52    130° 46' W      WIND SSW 11 1500 (+8)    DEPTH 44 fm      63°/60° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	15.53	32.74	0.510
5	15.47	32.71	0.522
10	15.35	32.72	0.528
20	15.13	32.71	0.527
30	15.11	32.69	0.529
40	14.93	32.69	0.522
49	8.72	32.79	0.584
68	8.21	32.80	0.575

STA 183      46° 44' N      WEATHER c. 26 Aug 52    130° 29' W      WIND WNW 14 0413 (+8)    DEPTH 1520 fm    59°/57° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	15.26	32.66	0.536
5	15.21	32.65	0.536
10	15.22	32.66	0.540
20	15.19	32.65	0.539
30	15.16	32.65	0.544
50	-----	32.74	0.555
100	7.50	32.82	0.590
200	6.58	33.81	0.371
300	5.34	33.90	0.257
483	4.34	34.02	0.111
725	-----	34.25	0.031
968	3.42	34.40	0.027
1463	2.59	34.52	0.068
1962	1.96	34.59	0.127

STA 185      46° 47' N      WEATHER c. 27 Aug 52    130° 44' W      WIND S 3 1843 (+8)    DEPTH 100 fm    61°/59° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	15.45	32.68	-----
5	15.44	32.68	-----
10	15.34	32.68	-----
20	15.13	32.68	-----
40	13.40	32.70	-----
60	8.44	32.83	-----
79	7.99	32.84	-----
98	-----	32.85	-----
118	7.16	33.11	-----
148	6.93	33.41	-----
178	6.68	33.62	-----

STA 186      46° 49' N      WEATHER c. 27 Aug 52    130° 42' W      WIND S 3 2004 (+8)    DEPTH 500 fm    61°/59° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	15.49	32.66	-----
10	15.39	32.68	-----
20	15.16	32.68	-----
30	15.08	32.67	-----
50	10.18	32.70	-----
75	7.89	32.75	-----
100	7.54	32.81	-----
149	6.88	33.47	-----
199	6.37	33.77	-----
298	5.38	33.87	-----
448	4.58	34.01	-----
898	3.60	34.33	-----

STA 188      46° 39' N      WEATHER 42 28 Aug 52    130° 35' W      WIND WNW 8 0049 (+8)    DEPTH 1180 fm    60°/58° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	15.76	32.77	-----
5	15.22	32.77	-----
10	15.58	32.77	-----
20	15.42	32.77	-----
30	15.40	32.76	-----
49	9.36	32.77	-----
98	7.70	32.83	-----
196	6.80	33.77	-----
294	-----	33.86	-----
495	4.33	34.04	-----
742	-----	34.25	-----
990	3.44	34.38	-----

STA 187      46° 53' N      WEATHER c. 27 Aug 52    130° 35' W      WIND SW 6 2152 (+8)    DEPTH 1600 fm    60°/58° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	15.54	32.63	-----
5	15.33	32.63	-----
10	15.43	32.64	-----
20	15.14	32.63	-----
30	14.97	32.63	-----
50	8.18	32.74	-----
100	7.11	32.74	-----
200	6.40	33.78	-----
299	5.31	33.89	-----
498	4.25	34.09	-----
747	3.86	34.27	-----
997	3.35	-----	-----

STA 189      46° 39' N      WEATHER c. 28 Aug 52    130° 57' W      WIND WNW 8 0327 (+8)    DEPTH 1260 fm    60°/59° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	15.46	32.67	-----
5	15.41	32.69	-----
10	15.36	32.67	-----
20	15.19	32.68	-----
30	15.16	32.70	-----
49	8.83	32.75	-----
98	7.46	32.78	-----
195	6.50	33.79	-----
293	-----	33.93	-----
493	4.32	34.07	-----
741	3.83	34.28	-----
990	3.37	34.39	-----

STA 190      46° 53' N      WEATHER c. 28 Aug 52    130° 57' W      WIND WNW 7 0607 (+8)    DEPTH 1420 fm    60°/58° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	15.40	32.66	-----
5	15.39	32.68	-----
10	15.30	32.64	-----
20	15.08	32.65	-----
30	15.02	32.65	-----
50	8.45	32.76	-----
98	7.20	32.72	-----
197	6.42	33.78	-----
295	5.31	33.88	-----
493	4.38	34.05	-----
740	3.82	34.23	-----
988	3.31	34.37	-----

STA 192      46° 44' N      WEATHER 62 29 Aug 52    126° 45' W      WIND WNW 20 0653 (+8)    DEPTH 1420 fm    60°/59° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	15.60	32.48	0.515
5	15.63	32.47	0.510
10	15.58	32.48	0.510
20	15.30	32.48	0.523
30	13.75	32.49	0.560
50	8.57	32.63	0.604
99	7.61	32.83	0.530
198	7.00	33.87	0.258
297	5.94	33.98	0.173
496	5.06	34.12	0.081
745	4.24	34.28	0.022
994	3.50	34.41	0.030
1492	2.56	34.56	0.072
1991	1.94	34.60	0.131

STA 191      46° 29' N      WEATHER 51 28 Aug 52    129° 59' W      WIND NW 8 1217 (+8)    DEPTH 1490 fm    67°/65° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg- /L)
0	15.81	32.65	0.516
5	15.76	32.66	0.530
10	15.66	32.66	0.524
20	15.30	32.65	0.525
30	15.24	32.69	0.525
49	10.52	32.71	0.619
98	7.78	32.79	0.527
193	6.72	33.83	0.376
290	-----	33.90	0.228
496	4.73	34.07	0.068
744	3.94	34.25	0.028
992	3.38	34.39	0.025
1490	2.53	34.49	0.065
1988	1.99	34.61	0.128

STA 193      46° 45' N      WEATHER c. 29 Aug 52    125° 40' W      WIND NNW 10 1350 (+8)    DEPTH 1010 fm    66°/64° F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	-----	32.20	-----
5	15.60	32.22	-----
10	15.50	32.23	-----
20	12.98	32.36	-----
30	9.92	32.58	-----
50	7.94	32.64	-----
99	7.38	33.22	-----
198	6.73	33.94	-----
298	5.93	34.02	-----
498	4.97	34.17	-----
748	4.15	34.30	-----
997	3.39	34.45	-----
1399	2.74	34.54	-----
1798	2.24	34.59	-----

STA 194      46° 44' N      WEATHER o. 29 Aug 52    125° 04' W      WIND NNW 10 1857 (+8)    DEPTH 400 fm    60°/-- F			
Depth (m)	Temp (°C)	Sal (‰)	O <sub>2</sub> (mg-at/L)
0	16.24	32.18	0.438
5	16.22	32.19	0.496
10	16.20	32.17	0.495
20	15.83	32.19	0.495
29	10.32	32.39	0.560
48	8.04	32.60	0.520
72	7.41	32.90	0.443
96	7.56	33.36	0.342
193	6.77	33.92	0.214
289	6.03	34.00	0.144
482	5.14	34.14	0.077
674	4.30	34.23	0.038

STA 196      46° 45' N      WEATHER 52 29 Aug 52    124° 30' W      WIND ENE 6 2346 (+8)    DEPTH 51 fm    57°/-- F			
Depth (m)	Temp (°C)	Sal (‰)	O <sub>2</sub> (mg-at/L)
0	15.46	30.93	0.525
5	15.06	31.09	0.580
10	14.18	31.96	0.582
20	9.88	32.52	0.536
30	7.37	32.87	0.432
40	7.13	33.18	0.363
60	7.11	33.60	0.183
79	7.08	33.86	0.134

STA 195      46° 45' N      WEATHER o. 29 Aug 52    124° 47' W      WIND NNW 7 2121 (+8)    DEPTH 105 fm    58°/-- F			
Depth (m)	Temp (°C)	Sal (‰)	O <sub>2</sub> (mg-at/L)
0	15.67	31.70	0.540
5	15.39	32.09	0.534
10	15.28	32.19	0.532
20	11.22	32.42	0.580
30	8.80	32.50	0.559
40	8.23	32.59	0.546
59	7.58	32.95	0.455
78	7.46	33.33	0.381
98	7.40	33.59	0.314
118	7.14	33.77	0.209
148	6.97	33.88	0.142
178	6.72	33.92	0.141

STA 197      45° 30' N      WEATHER c. 31 Aug 52    124° 06' W      WIND NNW 8 1223 (+8)    DEPTH 50 fm    68°/-- F			
Depth (m)	Temp (°C)	Sal (‰)	O <sub>2</sub> (mg-at/L)
0	14.00	32.01	0.577
5	12.62	32.08	0.570
10	8.60	32.65	0.456
20	7.27	33.01	0.366
30	7.33	33.21	0.351
40	7.29	33.38	0.347
60	7.34	33.72	0.206
80	7.32	33.82	0.175

STA 198      45° 30' N      WEATHER c. 31 Aug 52    124° 25' W    WIND NNW 8 1414 (+8)    DEPTH 100 fm    66°/-- F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	15.73	31.17	0.546
5	15.22	31.56	0.562
10	14.20	32.27	0.560
20	8.74	32.56	0.554
30	7.98	32.66	0.556
40	----	32.73	0.522
59	7.52	33.30	0.412
79	7.51	33.36	0.328
98	7.37	33.25	0.251
118	7.26	33.84	0.225
147	----	33.94	0.176
176	6.88	33.95	0.145

STA 200      45° 30' N      WEATHER c. 31 Aug 52    125° 20' W    WIND N 13 2028 (+8)    DEPTH 1000 fm    61°/-- F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	16.08	32.08	0.516
5	16.06	32.07	0.519
10	16.14	32.21	0.514
20	15.42	32.35	0.546
29	10.24	32.58	0.657
48	8.46	32.62	0.591
96	7.68	32.97	0.483
193	7.24	33.88	0.228
292	6.20	33.99	0.175
487	5.33	34.08	0.080
732	4.35	34.25	0.035
979	3.71	34.38	0.035
1374	2.90	34.49	0.062
1771	----	34.55	0.121

STA 199      45° 30' N      WEATHER c. 31 Aug 52    124° 50' W    WIND NW 10 1730 (+8)    DEPTH 500 fm    62°/-- F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	16.21	28.50	-----
5	16.10	29.25	0.551
10	15.92	31.51	0.524
19	15.72	32.32	0.525
21	13.32	32.38	0.637
37	9.30	32.61	0.601
56	8.10	32.66	0.574
75	7.66	32.66	0.560
157	7.37	33.72	0.265

STA 201      45° 33' N      WEATHER b.c. 1 Sept 52    127° 09' W    WIND N 17 C952 (+8)    DEPTH 1550 fm    64°/-- F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	15.98	32.14	0.515
5	15.97	32.15	0.529
10	15.96	32.18	0.518
20	15.96	32.20	0.518
29	11.00	32.38	0.640
49	8.68	32.59	0.560
98	7.46	33.18	0.440
197	6.97	33.93	0.207
296	6.10	34.03	0.137
484	5.17	34.15	0.065
974	3.60	34.40	0.029
1470	2.65	34.54	0.116
1968	1.97	34.59	0.133



STA 202      45° 33' N      WEATHER c.			
1 Sept 52      129° 02'      WIND N 18			
2228 (+8)      DEPTH 1465 fm      62°/-- F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	16.75	31.98	0.505
5	16.72	31.96	0.512
10	16.72	31.98	0.503
20	16.70	31.98	0.509
29	15.94	32.24	0.524
49	9.99	32.66	0.630
99	7.69	32.78	0.560
196	6.51	33.85	0.305
295	5.58	33.92	0.227
496	4.54	34.09	0.089
746	4.03	34.31	0.026
996	3.35	34.42	0.027
1494	2.46	34.52	0.075
1993	----	34.60	0.142

STA 203      45° 41' N      WEATHER b.			
2 Sept 52      129° 40' W      WIND N 18			
0451 (+8)      DEPTH 1320 fm      62°/-- F			
Depth (m)	Temp (°C)	Sal (°/oo)	O <sub>2</sub> (mg-at/L)
0	15.95	32.34	-----
5	16.10	32.36	0.518
10	15.96	32.35	0.521
20	15.94	32.36	0.508
29	15.60	32.61	0.546
48	9.23	32.74	0.623
96	7.46	32.75	0.585
194	6.51	33.82	0.327
292	5.59	33.95	0.207
436	4.88	34.05	0.108
656	4.13	34.19	0.039
877	3.50	34.34	0.028
1336	2.73	34.48	0.053

# APPENDIX

## The Results of Phosphate Determinations for Cruise 7

STATION 121		STATION 127		STATION 140	
Depth (m)	PO <sub>4</sub> (μg-at/L)	Depth (m)	PO <sub>4</sub> (μg-at/L)	Depth (m)	PO <sub>4</sub> (μg-at/L)
0	2.11	0	0.71	0	0.92
5	2.11	5	0.72	5	0.88
10	2.42	10	0.86	10	0.96
20	2.42	19	0.77	20	0.93
30	2.37	28	0.88	30	1.13
50	2.15	47	1.02	50	1.28
75	2.88	94	1.04	90	1.84
100	2.88	187	1.85	181	1.63
150	2.88	268	2.25	272	2.88
200	2.88	413	2.40	453	3.17
		588	2.66	647	3.41
		766	2.76	850	3.13
		1157	2.65	1348	3.38
		1570	2.38	1841	2.89
STATION 122		STATION 130		STATION 143	
Depth (m)	PO <sub>4</sub> (μg-at/L)	Depth (m)	PO <sub>4</sub> (μg-at/L)	Depth (m)	PO <sub>4</sub> (μg-at/L)
0	0.62			0	0.48
5	0.90			5	0.42
10	2.04			10	0.42
20	2.44			20	0.72
30	2.59			30	0.89
50	2.39				
75	2.75				
90	3.11				
STATION 126		STATION 143		STATION 143	
Depth (m)	PO <sub>4</sub> (μg-at/L)	Depth (m)	PO <sub>4</sub> (μg-at/L)	Depth (m)	PO <sub>4</sub> (μg-at/L)
0	0.95			50	1.05
5	0.95			99	1.50
10	1.02			198	2.33
20	1.07			291	2.71
30	0.97			490	3.10
50	1.15				
100	1.34				
200	2.00				
300	2.43				
500	3.26				

# APPENDIX (continued)

## STATION 1145

Depth (m)	PO <sub>4</sub> ( $\mu$ g-at/L)
0	0.48
5	0.50
10	0.54
20	0.96
30	1.02
50	1.19
100	2.00
200	2.74
300	2.88
500	3.28
750	3.40
1000	3.44
1200	3.44
1400	3.10

## STATION 1146

Depth (m)	PO <sub>4</sub> ( $\mu$ g-at/L)
0	0.64
5	0.61
10	0.69
20	0.95
30	1.10
50	1.25
75	2.82
100	1.93
140	2.43
180	2.76

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